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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,064	06/15/2005	Sachiko Tokumura	042627-0110	4259
22428 7590 06/23/2008 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER PENG, KUO LIANG				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
06/23/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/539,064

Applicant(s)

TOKUMURA ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/21/07 IDS.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date 6/21/07, 6/15/08
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The Applicants' preliminary amendment filed June 15, 2005 is acknowledged. Claims 3-7 are amended. Now, Claims 1-7 are pending.

Specification

2. The disclosure is objected to because of the following informalities:
In the specification (page 4, 3rd line from bottom and last line), reciting "Claims 1 to 5" is improper.
Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimazawa (US 6 235 394).

Shimazawa discloses a thermo-expansive microcapsule comprising a polymeric shell produced by polymerizing monomer (I) (e.g., **acrylonitrile**), monomer (II) (e.g., **acrylic acid**, etc.), monomer (III) (e.g., **acrylamides**, etc.), monomer (IV) (e.g., ethylene glycol **di(meth)acrylate**, etc.) and monomer (V) (e.g., **isobornyl(meth)acrylate**, etc.). (col. 3, lines 30-62 and col. 4, line 19 to col. 5, line 48) The identities and amounts of these monomers are elaborated in col. 4, line 19 to col. 5, line 48. Inorganic compound such as silica can be employed for preparing the microcapsule. (col. 5, lines 49-53) The microcapsule has a maximum expanding temperature falling within the claimed range. (Abstract and Examples) The thermo-expansive microcapsules can be utilized to prepare a foamed and molded product. (col. 4, lines 1-14, col. 12, lines 29-61 and Examples)

6. Claim 3 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shimazawa.

Shimazawa discloses a thermo-expansive microcapsule, *supra*, which is incorporated herein by reference. Since the reference discloses all the limitations of the claim except the property, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as unpatentable over Shimazawa.

Shimazawa discloses a thermo-expansive microcapsule, *supra*, which is incorporated herein by reference. Shimazawa further teaches inorganic compound such as silica gel can be employed for preparing the microcapsule. Shimazawa is silent on the amount of the silica gel. However, the silica gel amount will affect the stability of the medium in which the polymerization is performed. (col. 5, lines 49-53) In other words, the amount of silica gel is a Result-Effective variable. Notably, the amount of the silica gel in shell of the microcapsule will closely relate to that in the medium. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize whatever amount of the silica gel

through routine experimentation in order to achieve a desired stability of the medium and in turn afford a microcapsule having corresponding amount of silica gel in the shell. Especially, Applicants do not show the criticality of the claimed amount of the inorganic compounds. See MPEP 2144.05 (II).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck, can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp

June 16, 2008

/Kuo-Liang Peng/

Primary Examiner, Art Unit 1796